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(54) Title: EXPANSION AGENTS FOR STEM CELLS

(57) **Abstract:** The present invention relates to a method and substance for maintaining the pluripotency and self-replication ability of a stem cell, such as a hematopoietic stem cell, while keeping it undifferentiated. Specifically, the present invention provides a composition for maintaining the expansion or pluripotency of a stem cell, comprising active STAT5, and a method using the same. STAT5 may be in the form of a protein or a nucleic acid. The composition may contain a cellular physiologically active substance (e.g., SCF, TPO, Flt-3L, etc.). The present invention also relates to a cell, a tissue and an organ prepared from the stem cell.